

IMSD *View*

INITIATIVE TO MAXIMIZE STUDENT DEVELOPMENT | VOLUME 9 ISSUE 1

Excellence Community
IMSD
Collaboration



BROWN

MESSAGE FROM THE DIRECTOR

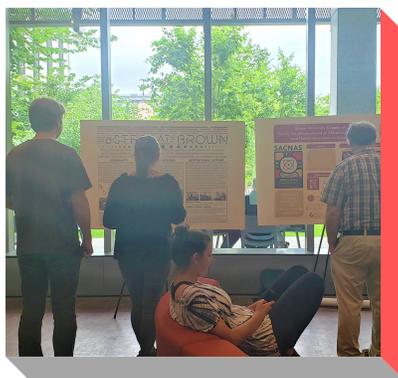
Since 2008 Brown's IMSD program goals have been successful in ensuring that students from historically underrepresented groups (HUGs) in STEM fields have equal access and opportunities to engage in cutting edge research and scholarly pursuits. The program's work provides HUG and other underrepresented students with the scaffolding that maximizes their success as graduate scholars at Brown.

This vision for success is being realized as record numbers of HUG students matriculate into graduate studies, complete their degrees and move into the ranks of STEM field-active scholars and practitioners. IMSD alums leave Brown with the agency that define them as STEM field contributors both inside and outside of the academy. Their continued successes promote the value of the program by affirming that given adequate time and support all students regardless of background can be meaningful contributors. Much of IMSD's success is based on Brown's embrace of the principles of diversity, inclusion and shared governance. These principles create a spirit of empowerment, a sense of belonging, and they respect our students' varied experiences. They are based on the understanding that not all students share the same lived history or have enjoyed the same privileges. As a result, we work to make room for, learn from and value differences which help to advance academic excellence.

Andrew G. Campbell, PhD
Dean of the Graduate School
Professor of Medical Science

5th Annual IMSD Summer Bash

In July, the IMSD Program hosted our 5th Annual IMSD Summer Bash in celebration of another successful year. Program participants and supporters joined us for lunch, networking, games, and a poster session highlighting student research and student groups. The IMSD program looks forward to continuing our work with students, faculty, staff, and groups across campus in the 2019-2020 academic year!



Save the Dates!

- December IMSD Community Lunch- December 18th
- 5 R's- January 2020
- Work Life Balance- February 2020

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Excellence

Outreach to Local High Schools

Former IMSD Trainee JJ Lomax visited local schools to talk about life as a graduate researcher in biology.



JJ Lomax, PhD candidate in Ecology & Evolutionary Biology

For me, research was a career opportunity I stumbled upon. Like many other students reading this, I was set on pursuing a career in medicine at the start of my undergraduate program. Growing up I felt I had one of three realistic career options to pursue if I wanted to be successful (from most desirable to least): medicine, law, engineering, or the slightest hope of a “Great Expectations” benefactor situation in the back of my mind. It wasn’t until I met an actual research scientist that I realized I could turn what I saw as a general, albeit above-average, interest in marine life into a full-fledged career. In my neighborhoods and family/friend circles, you didn’t run into researchers; we had no examples to encourage or develop our budding scientific curiosity. If you never have someone to tell you that your love of math, or insects, or backyard science experiments can actually turn into a career, then the likelihood of pursuing that career is merely left up to chance and an already gushing pipeline.

I write all this to say that there are so many students out there that could use an example of a research scientist in their lives, especially one that looks like them. This summer, I had the opportunity to perform some outreach, through the IMSD program, through visits to Young Woods (an elementary school in the south of Providence) and Central High (a high school in Providence) to talk with their students about careers in STEM and the college experience. The first thing that hit me is that these students were extremely intelligent. You could hear it in their questions as I explained my daily work and they would then proceed to ask the logical follow-ups or point out the experimental problems I struggle to resolve myself. The interest was there but the guidance and direction were lacking. For both the elementary and high school students there was an evident disbelief when I proceeded to tell them that asking questions that interest me was indeed my job and not just some hobby.

These students really need someone to tell them that they have potential and there are more options available to them. One student followed up with me to ask if college “look[s] like it does in the movies” and was worried that they would never get into a four-year college with a 3.5 GPA. Being on the other side we all know that a 3.5 is more than enough to get into an undergrad program, as well as the fact that the “traditional” route to earning a degree is not the only path. An associates degree program at a community college might be the intermediate step that some students need to go on and do great things. Another student was worried he would be stuck doing something he hated for the rest of their life because he felt he had no passions other than video games, which of course “couldn’t be a job”. We had a chance to talk about what drew him to video games and came to find out, he likes problem solving and might genuinely have a career in game development, or as I strongly hinted, any type of CS.

We all started these graduate degree programs because we love our work and at some point have had someone tell us that there was a future in pursuing these passions. As students at Brown, I think it is high time we start paying it forward to the next generation of scientists, especially those in our surrounding community. IMSD’s goal is to develop a diverse pool of scientists earning PhDs in STEM, but I don’t think we have to stop at the graduate level alone. I think that all IMSD trainees and Brown graduate students are primed to be the example of a research scientist that students in the greater Providence community need. If you agree, as I hope you do, reach out to the IMSD office or shoot me an email. I’ll see ya in homeroom after the bell. -JL

Rhode Island College Biology Colloquium

With the Rhode Island College (RIC) Biology Department, through a connection with IMSD Program alumna Anika Toorie, the Brown IMSD Program was happy to collaborate on a colloquium for undergraduate students. A panel was held on October 24th to familiarize RIC undergraduate students with the criteria and process for applying to a PhD program as well as answer other questions about their graduate school experiences.



Panel participants included Anita Zimmerman (Vice Chair of Molecular Pharmacology, Physiology and Biotechnology and Graduate Program Director for the Molecular Pharmacology & Physiology Program), Blessing Akobundu (former IMSD trainee and Ph.D. candidate in Molecular Pharmacology & Physiology), Tania Dominguez-Gonzalez (current IMSD trainee and graduate student in Molecular Biology, Cell Biology, and Biochemistry), and Anna Bock (graduate student in Bioengineering). The IMSD Program looks forward to future successful events with RIC and to encouraging the next generation of scientists in their academic journeys!

Publications

Kaiser NJ, Kant RJ, **Minor AJ**, Coulombe KLK. 2019, Optimizing Blended Collagen-Fibrin Hydrogels for Cardiac Tissue Engineering with Human iPSC-derived Cardiomyocytes., ACS biomaterials science & engineering, 5,887-899

LoVette A, Kuo C, Harrison A. Strength-based interventions for HIV prevention and sexual risk reduction among girls and young women: A resilience-focused systematic review. *Glob Public Health*. 2019 Oct;14(10):1454-1478. doi: 10.1080/17441692.2019.1602157. Epub 2019 Apr 7. PubMed PMID: 30955450; PubMed Central PMCID: PMC6779500.

Nicholson HE, Alsharif WF, Comeau AB, Mesangeau C, Intagliata S, Mottinelli M, McCurdy CR, Bowen WD. Divergent Cytotoxic and Metabolically Stimulative Functions of Sigma-2 Receptors: Structure-Activity Relationships of 6-Acetyl-3-(4-(4-(4-fluorophenyl)piperazin-1-yl)butyl)benzo[d]oxazol-2(3H)-one (SN79) Derivatives. *J Pharmacol Exp Ther*. 2019 Feb;368(2):272-281. doi: 10.1124/jpet.118.253484. Epub 2018 Dec 7

Restar AJ, Surace A, Ogunbajo A, Edeza A, Kahler C. The HIV-Related Risk Factors of the Cisgender Male Sexual Partners of Transgender Women (MSTW) in the United States: A Systematic Review of the Literature. *AIDS Educ Prev*. 2019 Oct;31(5):463-478. doi: 10.1521/aeap.2019.31.5.463. PMID: 31550195

Restar AJ, Santamaria EK, Adia A, Nazareno J, Chan R, Lurie M, Sandfort T, Hernandez L, Cu-Uvin S, Operario D. Gender affirmative HIV care framework: Decisions on feminizing hormone therapy (FHT) and antiretroviral therapy (ART) among transgender women. *PLoS One*. 2019 Oct 21;14(10):e0224133. PMID: 31634378

Restar AJ, Adia A, Nazareno J, Hernandez L, Sandfort T, Lurie M, Cu-Uvin S, Operario D. Barriers and facilitators to uptake of condoms among Filipinx transgender women and cisgender men who have sex with men: A situated socio-ecological perspective. *Glob Public Health*. 2019 Oct 20:1-12. PMID: 31630622

Wakeley ME, **Gray CC**, Monaghan SF, Heffernan DS, Ayala A. Check Point Inhibitors and Their Role in Immunosuppression in Sepsis. *Crit Care Clin*. 2020 Jan;36(1):69-88. doi: 10.1016/j.ccc.2019.08.006. Epub 2019 Oct 21. Review. PubMed PMID: 31733683; PubMed Central PMCID: PMC6863093.

Community

Welcome New Students!

Treshaun Burton- Chemistry

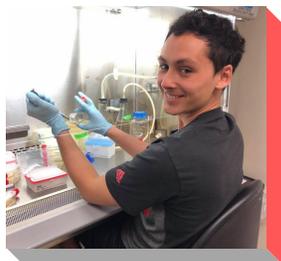
I am a 2nd year graduate student in the department of Chemistry. I became interested in chemistry because my high school chemistry teacher had an experiment that went bad with potassium and water and it caused a little explosion in the lab.



Treshaun Burton

Killian Campbell- Ecology and Evolutionary Biology

I am originally from Spokane, WA. Most recently, I worked as an NIH-PREP post-baccalaureate fellow at Fred Hutchinson Cancer Research Center in Seattle, WA. During that time, I researched the evolution of virulence in the human pathogen *Legionella pneumophila*. I am very excited to be joining Dr. Brandon Ogbunu's lab in Brown's Ecology and Evolutionary Dept.



Killian Campbell

Dallece Curley-Neuroscience

I am from Chesapeake, Virginia and completed my B.S. in Clinical Neuroscience at Virginia Tech. I spent the past year at the Mayo Clinic in Minnesota as an NIH PREP post-baccalaureate, participating in spinal cord injury research and the Mayo IMSD program. My research interests include cell and molecular neuroscience, more specifically neurological disorders and degeneration. In my free time, I enjoy zip-lining, traveling, and naps.



Dallece Curley

Tania Dominguez-Gonzalez- Molecular Biology, Cell Biology, and Biochemistry

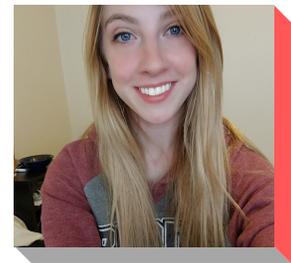
Let me tell you a secret as a Latina, I cannot wait to teach not only science but the amazing and happy culture of my beautiful island Puerto Rico. I also cannot wait to learn and expand my intellectual horizons with research and society.



Tania Dominguez- Gonzalez

Lacie Dube- Chemistry

I grew up in Naugatuck, Connecticut, where I learned about my love of Chemistry in high school. For undergraduate studies, I obtained my bachelor of science in chemistry, while completing four publications in Dr. Jing Zhao's research group. I have been studying metal nanoparticle, and how they can be used as new substrates for biomedical research and engineering. Now that I am at Brown, I will continue studying inorganic nanoparticles, but in new fields.



Lacie Dube

Kristen Fregoso- Molecular Pharmacology & Physiology

I am in the molecular pharmacology and physiology program and work in a neuro-oncology laboratory with Dr. Nikos Tapinos. I am in love with my research project and I enjoy running with my dog Banana.



Kristen Fregoso

Lourdes Gomez- Ecology and Evolutionary Biology

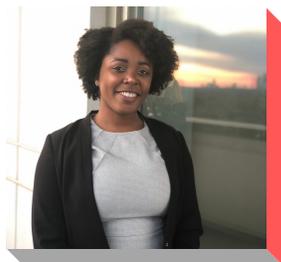
I was born and raised in Central California, where I received my BS in marine biology at UC Santa Cruz. I love being outdoors, and my fascination with the natural world has driven me to pursue the study of molecular evolution under Dr. Brandon Ogbunu.



Lourdes Gomez

Kiara Lee- Biomedical Engineering

I am a 2nd year PhD student in Biomedical Engineering who works on sample preparation microfluidic devices for Next Generation Sequencing. I am also serving as the co-president for Graduate Students of Color in STEM and is a Graduate Community Fellow. When not in school I run a food blog and love exploring new restaurants and locations.



Kiara Lee

Gerardo Reyes Chavez- Molecular Biology, Cell Biology, and Biochemistry

I was born in Lima, Peru. I moved to the USA at age 18 years old. I did an AS in Biology at LaGuardia Community College, and a BS in Biology at The College of Mount Saint Vincent, both in NY. Now I am a PhD student in the Molecular Biology, Cell Biology, and Biochemistry department here at Brown University.



Gerardo Reyes Chavez

Amanda Ruiz- Pathobiology

I am a second-year student in the Pathobiology program. I am doing my thesis in Dr. Jake Kurtis' molecular parasitology and immunology lab and the aim of my research is to identify parasite antigens which can potentially serve as vaccine candidates for schistosomiasis, a neglected tropical disease. I am originally from Queens, NYC. I enjoy playing intramural basketball and watching The Office when I am not in lab.



Amanda Ruiz

Collaboration

IMSD and Brown Graduate Programs Host STEM Diversity Preview Day

On October 20-21, 2019, IMSD, in partnership with the Graduate School, Division of Biology & Medicine, and over 15 departments across STEM disciplines, our Annual Diversity Preview Day on campus. This event serves as an opportunity for prospective PhD students to visit Brown to learn about all the opportunities and support available for graduate students- academically, professionally and socially. Over Sunday and Monday, students were able to present their current research to Brown faculty, tour graduate program departments, and speak with current PhD students about their graduate experience. Preview Day began as a small event with IMSD Partner institutions visiting Brown but has now expanded through the years into its current state of two weekends (the recent STEM weekend and an upcoming Humanities and Social Sciences weekend) to become a valuable opportunity for graduate programs across campus to engage with potential applicants. We'd like to thank all the programs that participated for this important weekend and look forward to improving the event for future years!



Funding Opportunities

National Institutes of Health - Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31)

Application Deadline: December 8, 2019

American Association for the Advancement of Science - Mass Media Science and Engineering Fellowships

Application Deadline: January 1, 2020

National Institutes of Health - Aging Research Dissertation Awards to Increase Diversity (R36) -- AIDS

Deadlines: AIDS Deadlines: Jan. 7, 2020, R36 Deadlines: Feb. 16, 2020

National Academies - Ford Foundation Predoctoral Fellowships For Achieving Excellence in College and University Teaching

Application Deadline: January 7, 2020

Howard Hughes Medical Institute - Graduate Research Fellowships

Application Deadline: January 15, 2020



The IMSD program at Brown titled "Advancing the culture of PhD learning and scholarship in Biology and Health Sciences" provides research training support for students in underrepresented groups to significantly increase the participation of these groups within the fields of biomedical and behavioral research. The program is funded by grant R25GM083270 from the National Institute of General Medical Sciences of the National Institutes of Health since April 2008.

FOR PROGRAM INFORMATION, CONTACT:

IMSD Program, Brown University
Box G-A2
Providence, RI 02912
Phone: 401-863-3777
Email: imsd@brown.edu
Website: <https://www.brown.edu/initiatives/maximize-student-development/>

PROGRAM STAFF:

Andrew G. Campbell, PhD

Program Co-PI
Dean of the Graduate School
Professor of Medical Science

Elizabeth O. Harrington, PhD

Program Co-PI
Associate Dean, Office of Graduate & Postdoctoral Studies
Professor of Medicine

Marlina Duncan, EdD

Assistant Vice President for Academic Diversity
Associate Dean of Diversity Initiatives

Jennifer Ducharme

IMSD Program Coordinator

Tracey Cronin

IMSD Program Administrator

PARTNER INSTITUTIONS

- St. John's University, New York, NY
- York College of the City, University of New York (CUNY), Queens, NY
- North Carolina A & T State University, Greensboro, NC
- The College of Mount Saint Vincent, Bronx, NY
- Morgan State University, Baltimore, MD